## **ABSTRACT**

A tether system includes tethers each having an upper section (1) attached to a tension leg platform (TLP) (4), and each upper section has a large diameter so that the upper section (1) is positively buoyant. This buoyancy can be designed to compensate for the weight of the lower section (2) of each tether, so as to make the total buoyancy of each tether closer to neutral. The selection process for each section is driven by requirements for buoyancy, stiffness and external pressure resistance.